REMARKS

In the Action dated July 15, 1996, the Examiner has withdrawn the rejection of Claims 1, 2 and 18 under 35 U.S.C. § 102(b); however, the Examiner has lodged a new ground of rejection of those claims under 35 U.S.C. § 103.

The Examiner has rejected Claims 1, 2, 12 and 18 under 35 U.S.C. § 103 as being unpatentable over *Yamazaki*, Japanese Patent Application 4-205852. That rejection is respectfully traversed.

In response to Applicant's previous amendment in which Claims 1 and 18 were amended to recite means for accessing data stored within the cache if a read/write request from the computer can be satisfied via an access to the cache memory and means for designating selected data within the cache as new data in response to a write from the computer which updates data within the cache and thereafter replacing that data within the storage element when the storage element is at operating speed as a result of a read or write request which required an access to that storage element.

In response to Applicant's amendment, the Examiner believes that it is clear from the teaching of *Yamazaki* that when data is found within the cache that data is exchanged between the cache and the host. However, the Examiner relies on so-called "inherence" with respect to the second feature recited above. Specifically the Examiner believes it is inherent within *Yamazaki* that data which has been updated must be tracked in order to maintain cache coherency. Applicant agrees that data which has been modified must indeed be tracked; however, *Yamazaki* is entirely silent on the subject of a cache replacement mechanism which updates data within the storage element when another disk transaction has occurred which requires an access to the disk.

In direct contrast to the alleged obviousness of this technique, the Examiner states "it is well known in the art that there is a certain degree of risk to

data coherency associated with write caching, since a failure in the cache or the power supply to the cache or the disk drive may result in lost data." Applicant urges the Examiner to consider that in view of this "well known degree of risk", those having ordinary skill in the art would, upon reference to the *Yamazaki* publication, be inclined to update the data within the storage element each time an update to the data has occurred within the cache, rather than suffer the possible risk to data coherency acknowledged by the Examiner as "well known" in the art.

Further, the Examiner states "it is also well known that spinning up a disk's platters takes a substantial amount of electrical energy, while maintaining a disk's platter at operating speed requires less power." Applicant urges the Examiner to consider that this statement is precisely contrary to the claimed invention set forth within the present application wherein the disk is shut down during those periods of time when data may be accessed from the cache and wherein data updated within the cache is transferred to the disk only after the disk has been placed in an operating condition as a result of a disk access unrelated to the updated data present within the cache. Consequently, Applicant urges that the Examiner's assertions with respect to the "well known" aspects of this invention are directly contrary to the claimed invention set forth within Claims 1 and 18 and urges that a rejection of those claims over the *Yamazaki* reference as unpatentable in view thereof is not well founded and withdrawal of that rejection is respectfully requested.
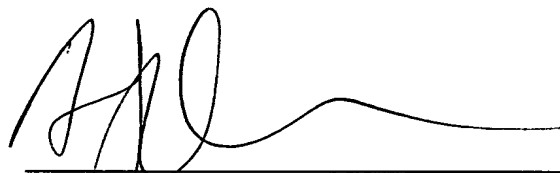
Presumably with respect to Claim 2, the Examiner states "It is noted that caches are organized into blocks which are equal sized, and therefore the time it takes to transfer new data blocks is predetermined." Claim 2 of the present invention sets forth that wherein the cache replacement mechanism carries out transfer of new data from the cache memory to the storage element, such replacement only occurs "for a predetermined time each time a read or write request has given rise to an access to the storage element." The Examiner's statement with respect to blocks of data being equal sized is not particularly relevant to this claim in that the claim sets forth a limitation whereby possibly only

a portion of updated data within the cache will be transferred to the disk during each write access, if the amount of updated data within the cache exceeds the amount of data which can be transferred during a "predetermined time. . ." Consequently, Applicant also urges that the Examiner's rejection of Claim 2 over the *Yamazaki* reference is also not well founded and withdrawal of that rejection is respectfully requested.

The Examiner has also rejected Claims 3, 10, 11, 13, 14, 15, 16 and 17 over the *Yamazaki* reference in combination with various secondary references. Each of those secondary reference is cited for the purpose of suggesting the features set forth within the independent claim and none of those references, whether considered alone or in combination, show or suggest in any way the invention set forth within Claim 1, from which those claims depend either directly or indirectly. As a consequence, Applicant urges that these rejections are also not well founded and withdrawal of those rejections is respectfully requested.

No extension of time is believed to be required; however, in the event an extension of time is required, please consider that extension requested and please charge the fee for that extension, as well as any other fee necessary to further the prosecution of this application to Deposit Account No. **09-0465**.

Respectfully submitted,

Andrew J. Dillon
Registration No. 29,634
FELSMAN, BRADLEY, GUNTER
    & DILLON, LLP
Suite 350 Arboretum Point
9505 Arboretum Boulevard
Austin, Texas 78759
(512) 343-6116

ATTORNEY FOR APPLICANT